Outdoors in georgia

March 1975

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March 1975 Volume IV Number 3

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ON THE FRONT COVER: Jack Wingate with an early spring bass on Lake Seminole. The bass will be spawning in the southern lakes soon, and that's the time to break out your flyrod. Photo by Aaron Pass.

ON THE BACK COVER: Spring brings a graceful beauty to the south Georgia swamps. Photo by Jim Couch.

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Endangered Wildlife

From a legislative standpoint 1973 was a significant year for endangered wildlife species. The Georgia General Assembly passed two meaningful laws: the Endangered Wildlife Act and the Wildflower Preservation Act. Congress approved the comprehensive Endangered Species Act, which demands state-developed endangered species programs and authorizes federal assistance for such efforts.

In the past two years, the Department of Natural Resources has taken steps to implement these state and federal laws. In this issue "A Clearly Present Danger" by Aaron Pass and Ron Odom provides a progress report on this program. So far, most attention has been devoted to identifying and listing those species (both flora and fauna) in an endangered or otherwise questionable status.

The question now is what is to be done, for it does no good merely to recognize that a species is in trouble as it slides away into oblivion. In some cases, simple protection will be enough, but others require positive management. And this requires money.

Federal funding for cooperative state-federal endangered species programs was authorized by Congress in 1973, but the money has not been forthcoming. These funds were among those impounded by former President Nixon. The lack of this money is a serious obstacle to the development of Georgia's endangered species program.

When, and if, this federal money is released, it likely will be inadequate for full implementation of the program; other funds will be needed.

Revenue from hunting and fishing licenses traditionally has been used to manage game and fish. Further stretching the license dollar to cover endangered species research would not be adequate. Perhaps additional funding could be arranged by allowing "non-consumptive users" such as picnickers and bird watchers to help finance the program through a re-defined "user" tax. Other states have sold "prestige" auto tags, or allotted general appropriations.

To assist endangered wildlife, we must fully understand the ecological relationships that affect each species. Only with this understanding can the Georgia endangered species program actively work not only to protect, but, as far as possible, to restore declining wildlife.

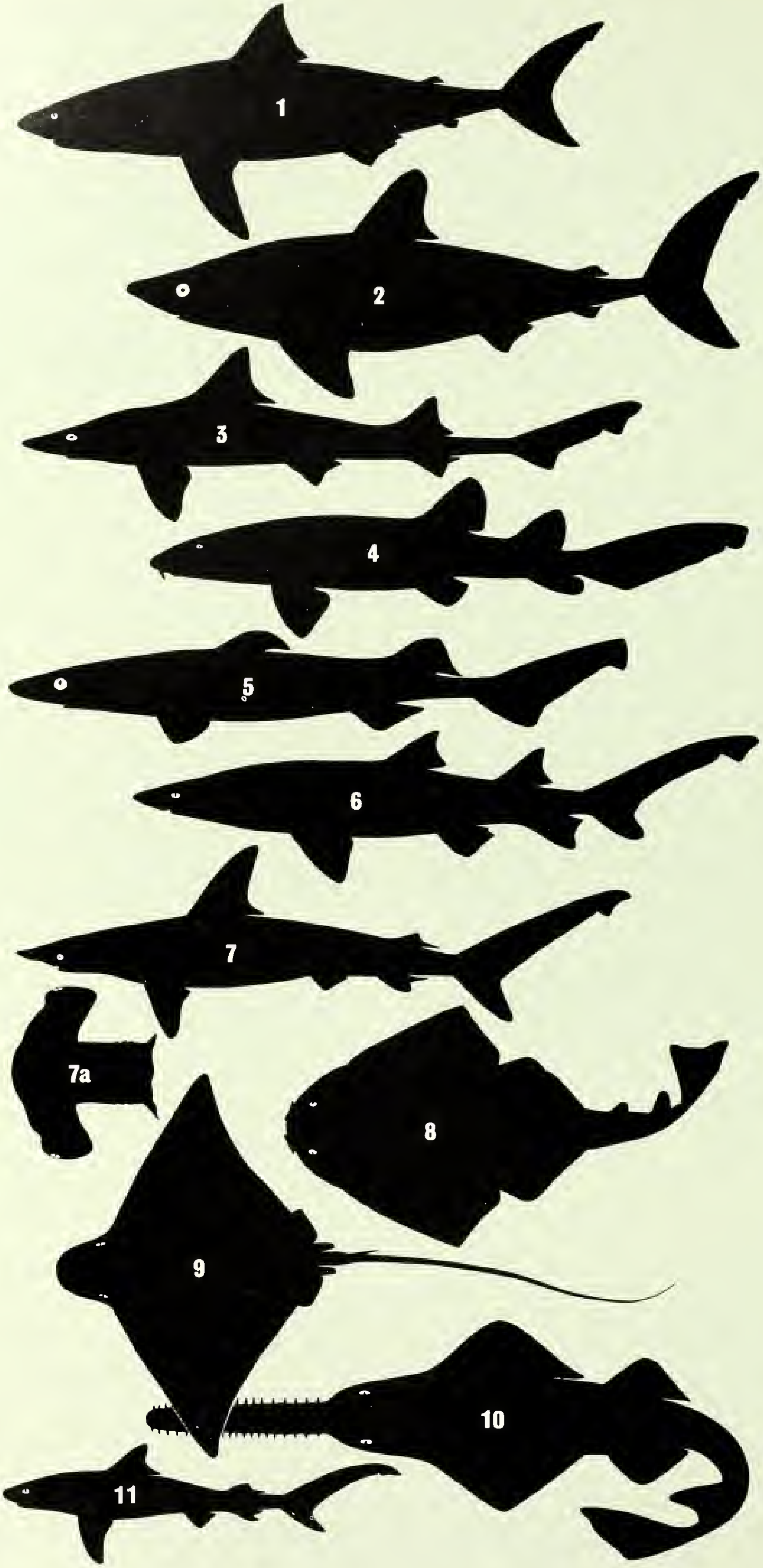
David Crawshaw

Photos by Bob Busby
and Jim Couch

The Veterans

Scarred and rusting, they lie tangled in a shoebox, on a shelf, in a garage far from the lakes they were crafted to swim, from the bass they were designed to tempt.

Time, technique, and salesmanship decreed the end of their era and forced them into premature retirement. But wise old anglers still search — usually unsuccessfully — among the hundreds of new lures for a few that can compare with these, the veterans.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SHARK'S TEETH

By Gerard R. Case

Drawings by the Author

Forty million years ago in central Georgia sharks and other marine creatures swam where cars now speed along interstate highways.

Less than 15 miles south of Macon, in Twiggs County just off Interstate 16, lies a series of mines dotting the landscape on either side of the roadway. Some are visible from the highway, while others are farther back in the woods. These mines are operated by several companies mining valuable kaolin clay.

Kaolin is a pure white clay used principally for paper coating. The smooth, slick coating on this page is kaolin. It adds brightness and shine to the paper, enabling the ink to stand out better, improving visibility and reducing blotting.

* * *

Silhouettes of some of the most common types of sharks which were present in the ancient Georgia seas:

1. White shark
2. Mako shark
3. Liveroil shark
4. Nurse shark
5. False-cat shark
6. Sand shark
7. Hammerhead shark
8. Angel shark
9. Sting ray
10. Sawfish
11. Tiger shark

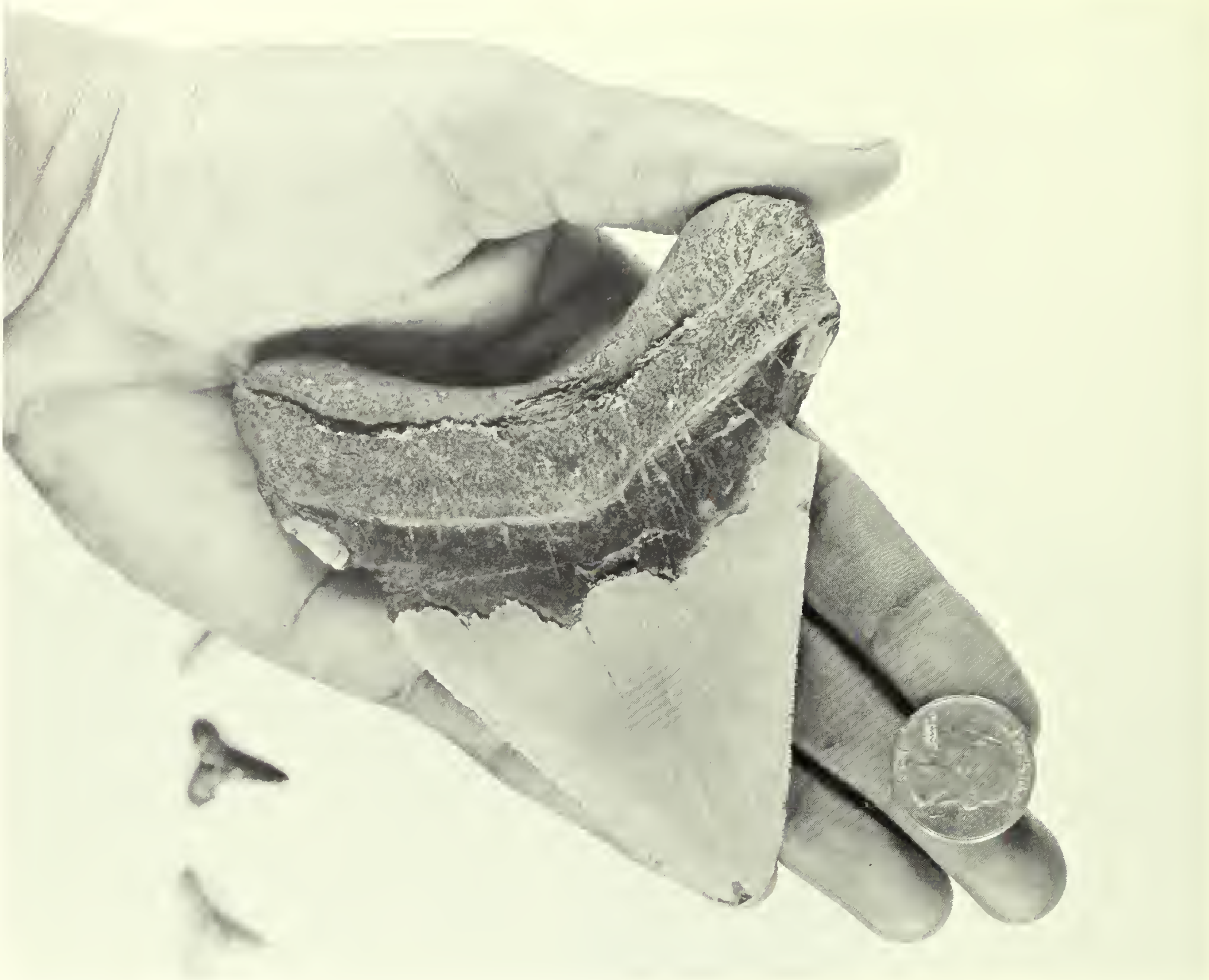
←

One of the spin-offs of this rich Georgia kaolin has been the discovery of the remains of fossilized marine creatures. The spoil piles from the mining reveal sea bottom sediments from 40 million years ago, now miles away from the shore. Fossils of the extinct ancestors of present day marine creatures can be found in the spoil piles. It takes a bit of imagination to realize that Central Georgia and other parts of the eastern United States once were beneath ancient seas, but the evidence from kaolin mines tells the unmistakable story in its fossils.

A great variety of fish species swam in these ancient seas. Sharks dominated this aquatic world, as demonstrated by the quantities of their fossilized teeth left behind. A heavy distribution of "bony" fishes—parrot-fishes, trunk-fishes, and bill-fishes—accompanied the sharks. Their large numbers indicate a food chain of massive proportions in the "Central Georgia Seas".

Along with the many fish, large sea-turtles, sea-snakes, crocodiles, and at least one primitive whale inhabited these seas. The floor of the sea was covered with an abundance of invertebrate life. Among these were the ancestors of the modern sand-dollar (echinoids), and a variety of mollusks, such as scallops, clams, and oysters. Present too were the ubiquitous crustaceans, the shrimps, crabs, and lobsters.

In addition to sandy bottom dwellers, other marine life existed on and around reefs made up of thousands upon thousands of minute bodies of coral polyps. Bryzoans, sponges and barna-



This monstrous tooth was found recently on one of Georgia's coastal islands. Measuring about five inches along the side, it is the largest ever found in the state, although not the largest known. Atlantan Falma Moye discovered this rare relic.

Photo by Ed Brock

cles were plentiful. It seems evident by the variety and types of bony fishes that sand-dollars, urchins, and reefs were the exclusive food source for the "nibblers" such as the parrot and trunk fishes and the squirrel-fishes. These then were the "coral-reef dwellers" who, in turn, were the chief food source for the predators: the sharks, sawfish, barracudas, and crocodiles.

Sharks were numerous in the middle Georgia seas, including such species as giant white sharks (*Carcharodon*), tiger sharks (*Galeocerdo*), liveroil sharks (*Galeorhinus*), sand sharks (*Odontaspis*), false cat sharks (*Scyliorhinus*), angel sharks (*Squatina*), porbeagle sharks (*Lamna*), mako sharks (*Isurus*), nurse sharks (*Gingylmostoma*), lemon sharks (*Negaprion*), dusky and brown sharks (*Eulamia*), hammerhead sharks (*Sphyrna*), as well as their cousins, the sting-rays (*Myliobatis*), and the sawfishes (*Pristis*).

Sea-snakes were present, with a variety of water pythons in abundance. Alligators were common. Turtles of a variety of species were present. The whales were represented by the oldest member of their family, the "Yoke-toothed" whale, a mammal which evolved from a land form. Primitive porpoises and manatees were widespread.

The plates and figures show the types of fossil material to be found in a few field excursions through the kaolin mines. Plates 1 and 2 show typical tooth and bone material.

Fossils usually occur in "pockets" within the mine, and you will have to search for them. Many of the old abandoned mines are composed of hill after hill of sand, clay, and other sediments. The only way to find the "pockets" of fossil material is to search each area carefully until you begin to see traces of fossil material. It may even be necessary to crawl on hands and knees to spot tiny teeth, or even a large tooth with only a tip exposed. You'll need some sort of collecting bag or container in which to place your specimens. For more fragile specimens, line a cigar box with cotton or soft paper. Transport your treasures safely home, and repair them at your leisure.

Before you go, here are some important hints:

1. You must obtain permission before entering any mine property! Mine policies vary, and it may not be possible to collect in many areas. Be prepared to tell the mine office where you would like to collect. Of course, abide precisely by any rules the mining company has established.
2. Federal law requires you to wear a hard hat and safety glasses when in a mine area. Failure to do this would bring a stiff fine against the mining company. This rule is for your safety. Stay well away from any pit walls.
3. Do not touch mine equipment.
4. Leave gates as you found them.
5. Watch for snakes! Be especially careful when reaching up or climbing onto a ledge, where a snake may be sunning.
6. Be careful when walking. The ground may be wet and slippery, or loose and crumbling when dry. A bad fall can result.
7. Do not leave a trail of refuse. Carry out whatever you take in, especially food wrappers, drink bottles, and film cartons. Take plenty of drinking water.

For your comfort, wear old clothes and sneakers or boots (not the kind with lug soles). Clay pits frequently are muddy, and most have standing water in the deepest parts.

The specimens you find in the mines may be very important to science. It will help if you show your "finds" to a local museum, the geology department of a large college, or the Earth and Water Division of the Department of Natural Resources. In the event that you find something which is not illustrated in this article, the author will be pleased to look over your material and identify it for you. Please send your material with your name and address (clearly printed) and where you found it to:

Gerard R. Case
129 Carlton Avenue
Jersey City, New Jersey 07306

If the material is important enough for you to want it returned, add sufficient return postage and a self-addressed mailing label. Specimens then will be returned to you.

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PLATE 1.

1. **Lamna lerichei** Casier (Porbeagle shark), 2. **Odontaspis hopei** Agassiz (Sand shark), 3. **Odontaspis acutissima** Agassiz (Sand shark), 4. **Hemipristis wyattdurhami** White (Extinct reqieum shark, upper jaw teeth), 4a. **Hemipristis wyattdurhami** White (lower jaw teeth), 5. **Galeorhinus** sp. (Liveroil shark), 6. **Scyliorhinus enniskilleni** White (False cat shark), 7. **Galeocerdo clarkensis** White (Tiger shark), 8. **Ginglymostoma obliquum** Leidy (Nurse shark), 9. **Negaprion gibbesi** (Lemon shark), 10. **Myliobatis** sp. (Sting-ray teeth), 11. **Propristis schweinfurthi** Dames (Extinct sawfish, rostral teeth), 12. **Pristis lathami** Galeotti (Sawfish rostral tooth, 2 views), 13. **Myliobatis** sp. (Sting ray tail barbs), 14. Shark coprolites (fecal pellets), 15. **Trichiurus** sp. (tooth, extinct fish), 16. **Arius** sp. (Fish pectoral spine, possibly a catfish).

PLATE 2.

17. **Cybium** sp. (fish jaw, 2 views), 18. **Diodon** sp. (Parrotfish jaw, 2 views), 19. **Cylindracanthus rectus** (Bill fish, rostrum fragments), 20. **Sphyraena** sp. (Barracuda teeth), 21. **Triodon** sp. (Fish jaw-crusher type, 2 views), 22. **Ostracion meretrix** Leriche (Trunkfish body scale), 23. **Trionyx** sp. (Turtle shell), 24. **Palaeophis** sp. (Python snake vertebra, 4 views). →
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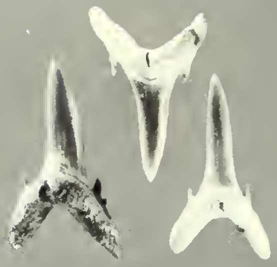

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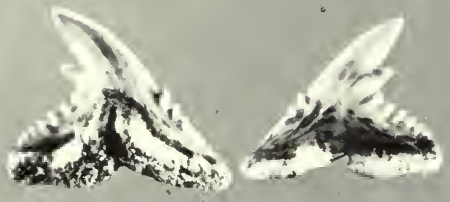

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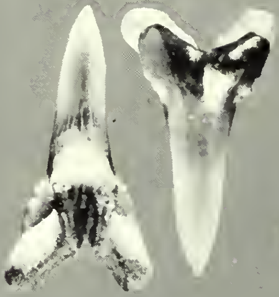

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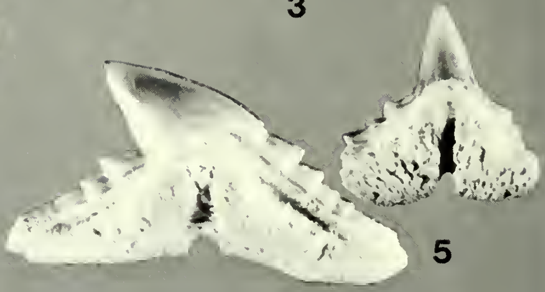

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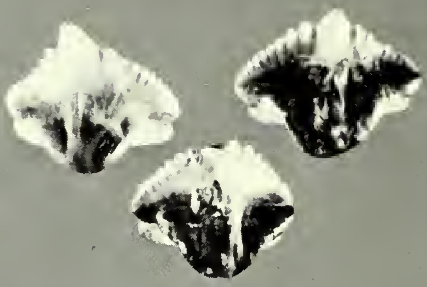

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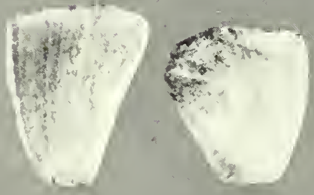

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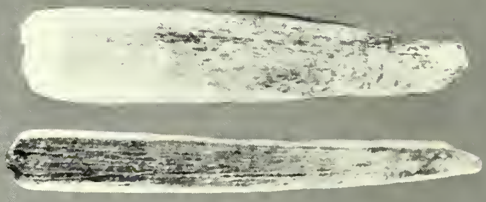

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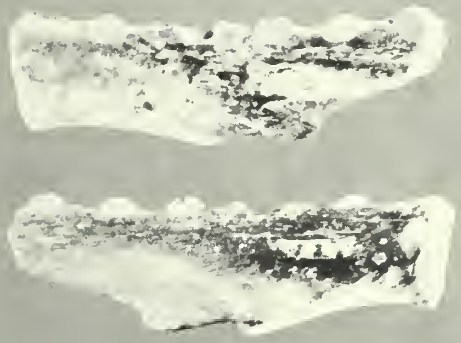

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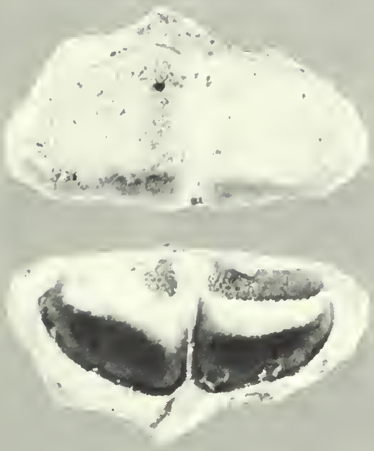

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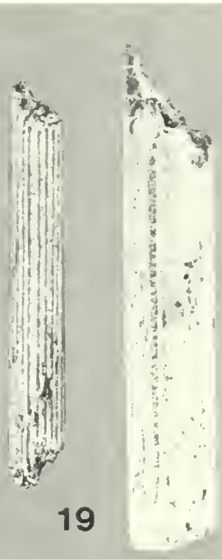

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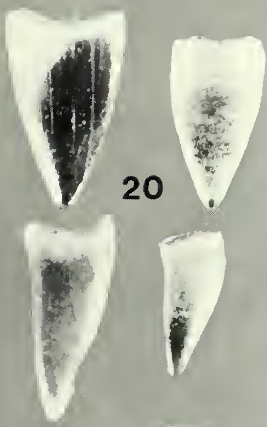

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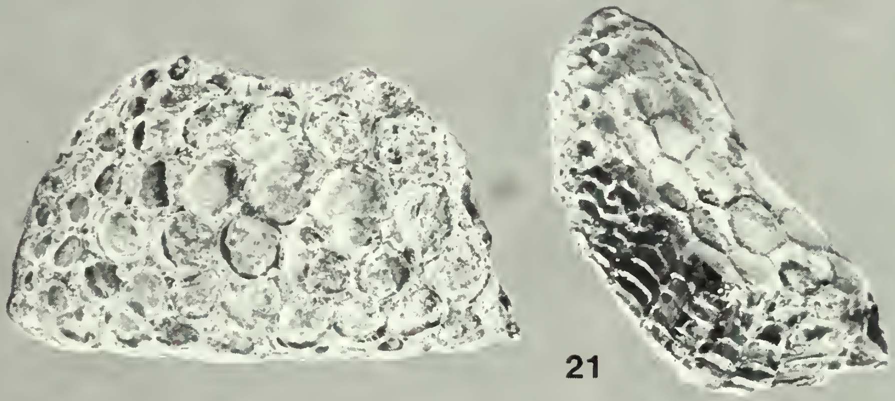

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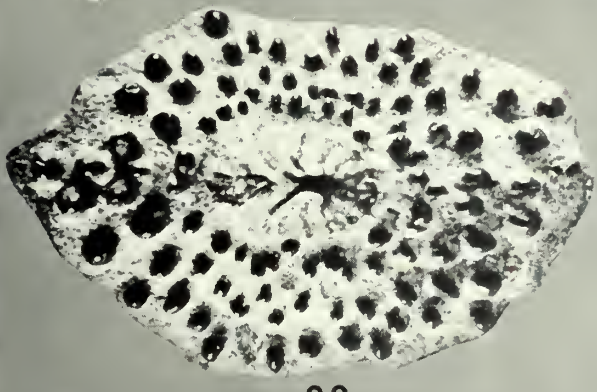

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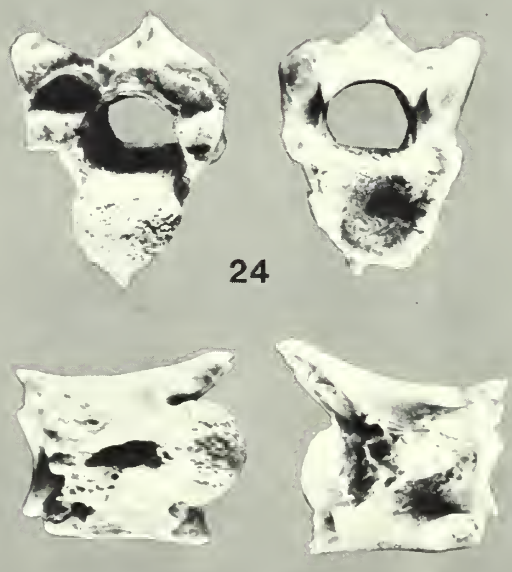

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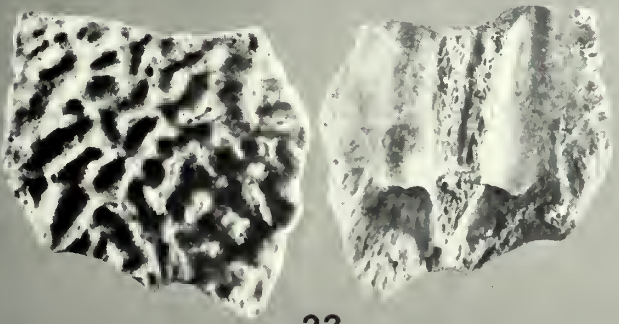

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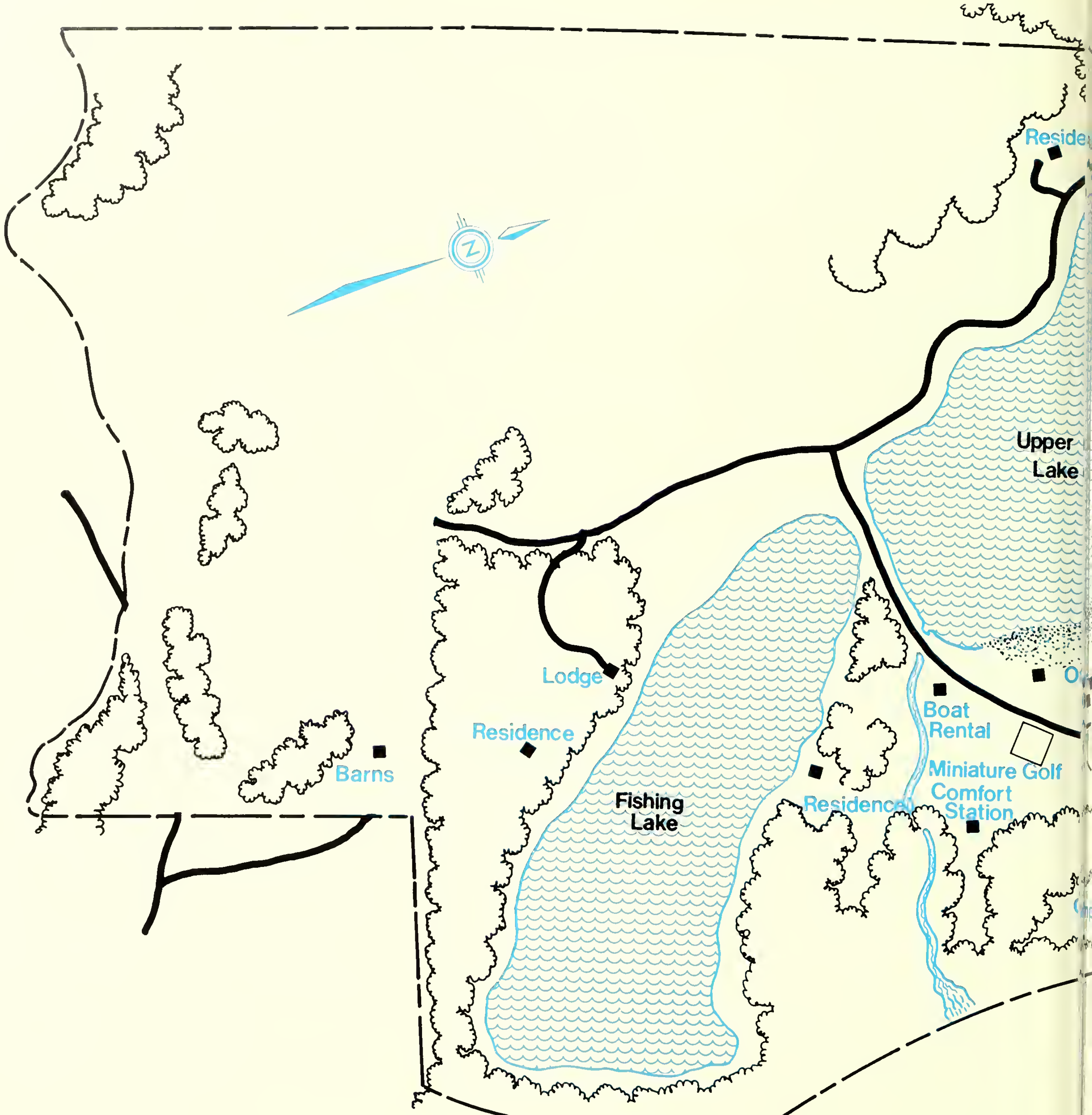
Photos by Paul Menut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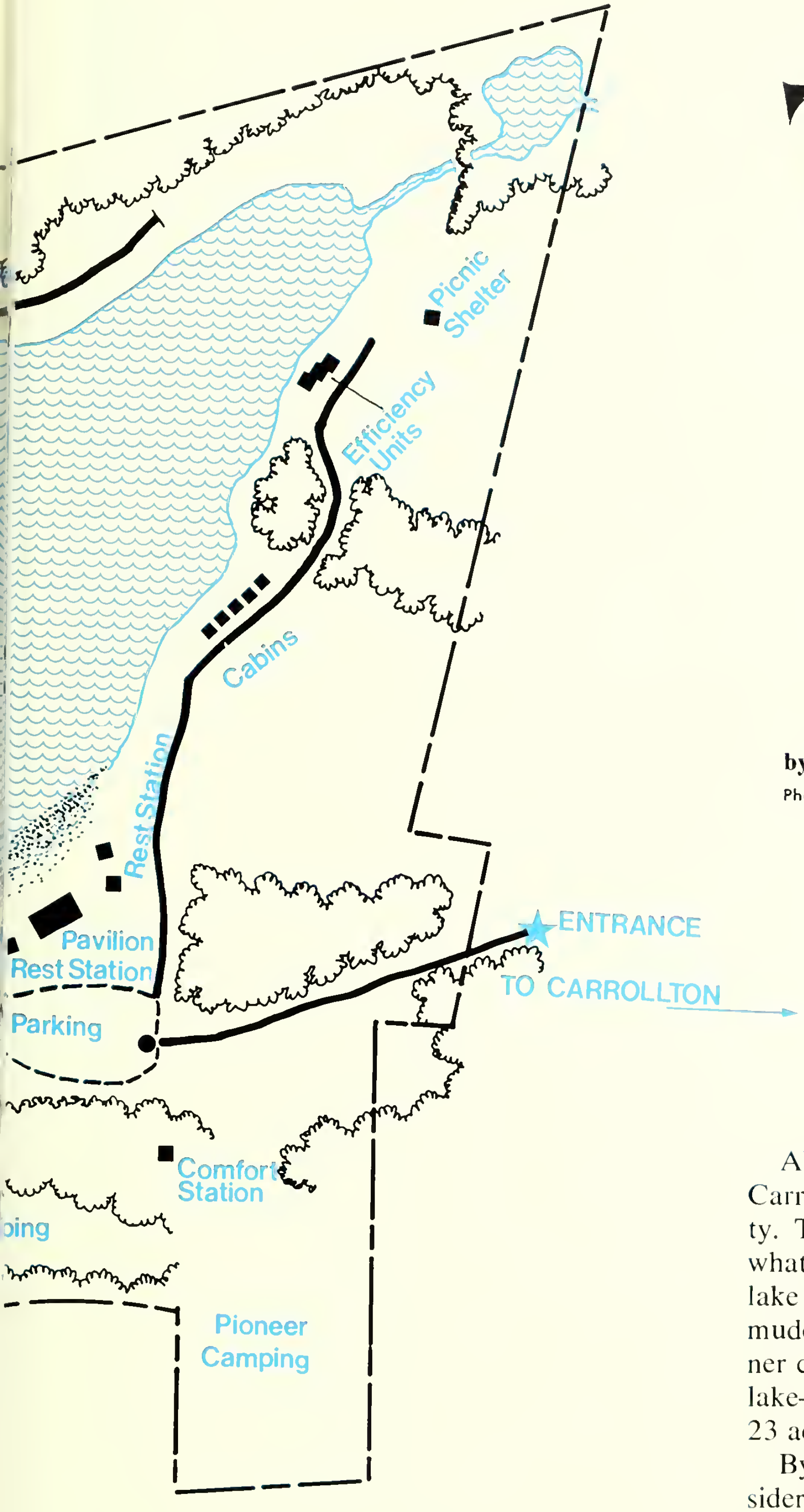

John Tanner State Park

by Bill Morehead

Photos by Ed Brock

About fifteen years ago, John Tanner, Sr., of Carrollton built a private lake in Carroll County. This in itself was not at all unusual, but what happened afterwards was. The 28-acre lake had a problem — it consistently stayed muddy. To solve the mud problem, Mr. Tanner constructed a dam at the headwaters of the lake— thereby creating another lake of about 23 acres.

By this time Mr. Tanner had invested a considerable amount of money in the project, and all he had was two lakes. In search of a method of gaining some return on his investment, he hit

Photos by Ed Brock

upon the idea of constructing a beach on the second lake and opening the lakes to the public.

When people in the recreation-starved region of western Georgia heard about the beach, the number of visitors boomed. In the fifteen or so years of its existence, "Tanner's Beach" became one of the most popular outdoor attractions in western Georgia.

In 1970, when the Tanners decided to offer it to the state as a state park, "Tanner's Beach" had developed into quite a holiday park, with 60 campsites complete with electric and water hookups, 13 cottage/motel accommodations, a "hideaway" lodge capable of handling 40 people, a miniature-golf course, a covered pavilion of 2,000 seat capacity, picnic sites and an amusement center complete with a "fairyland world" and a narrow-gauge train.

The state opened it in 1972 as a state park—and changed the name from "Tanner's Beach" to John Tanner State Park.

The park manager, Pate Bridges, moved to Carroll County from Savannah, and his soft, mellifluous drawl masks a quiet, deep competence in park management.

Bridges suggests that the development of John Tanner State Park will be toward creating *natural* attractions. The amusement area—so vital to the economics of a private enterprise—will slowly fade out, to be replaced with attractions more in keeping with the nature themes.

The short-range plans for the park, according to Bridges, are to develop present campsites to their utmost and to add more campsites as soon as possible; to revamp the motel/cottage accommodations (which has already been done) by refurbishing the interiors and exteriors where needed; to construct a fence around the beach area (this too has been done) to protect the beach visitors and to permit some control over the use of the beach; and to complete many nature trails for the hiker and picnicker.

The Tanner lakes have long been known in Carroll County as a place where the fisherman can reasonably expect to haul in a decent catch. The parks staff, in cooperation with the Game and Fish Division, will concentrate its efforts toward developing the lower lake into a first-rate fishing lake. This lake is already a good spot for fish, but with the proper supervision it should become a genuine piscatorial gem.

Local people in the western Georgia area have so accepted John Tanner State Park that many frequently camp there on weekends. The last Fourth of July you could have held the Carrollton Rotary, Lions or Kiwanis meetings with the camping population at Tanner's and had a quorum in each case!

In the more than two years since John Tanner has existed as a state facility, the annual visitor population has climbed steadily (more than 500,000 visitors came to the Park in 1974). While the weekends may be hectic, a weekday camper can usually find the room he wants.

The family looking for a place in late summer or fall could not do better than to choose John Tanner State Park. The wintertime camper will find the park a little-used haven, for the great majority of visitors have as yet confined themselves to the May through Labor Day weeks of the year.

by Aaron Pass

Photos by Cathy Cardarelli

New Echota

Up in northwest Georgia, near the confluence of the Coosawattee and the Conasauga Rivers, at the beginning of the Oostanaula, on a flat, almost treeless plain, stands a strangely interrupted cluster of buildings. Disassociated by time and space, the structures, four in number, are most remarkable for their disunity. Two are old; two are not; and only one was built there. Two were the first of their kind—two were (and are) common structures. They are settled a wary distance apart and each is quite distinctive unto itself.

It is called New Echota, named for an old Indian town in Tennessee. It was the capital of the Cherokee Nation from 1825 until 1838, and it is a state historical site. Off to the side is a modern museum which recounts the history of the site and of the Cherokee leaders at New Echota. It stands at a distance, as if fearful to intrude on the strained disharmony among the buildings.

Entering the site, a visitor first encounters a low, long, log structure. (It is a reconstruction circa 1961; the original was destroyed in the Civil War.) This was the print shop and home of the *Cherokee Phoenix*. It was the first print shop established by American Indians, used to print the first Indian newspaper, in the first *written* Indian language.

The Cherokees had come to place a high value on literacy; many spoke and wrote in English, but many more could not. It often took many years for an Indian to develop a comfortable fluency in English. This delay hindered their leaders' attempts at nationwide communication.

In 1821, a written Cherokee language was adopted, a language developed by George Gist (Sequoyah), who composed a syllabary of written characters for Cherokee syllables. Thus the student needed only to learn the

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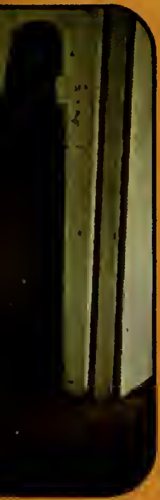


characters to be literate. The *Cherokee Phoenix* was printed in both English and Cherokee from 1828 until 1834, and served as the national newspaper.

The next building is original, but does not belong to New Echota. Vann's Tavern was built as a "public stop" by James Vann, a Cherokee, at a crossing on the Chattahoochee River. Built in 1805, it was moved and re-erected at New Echota in 1959; Lake Lanier now covers its original site. It serves as an example of the taverns that once stood in the capital.

The Worchester House is original and was built by Rev. Samuel A. Worchester, sent to New Echota by the American Board of Missionaries in 1827. The two story frame house is set some distance from the New Echota town site.

Worchester, like most of the other missionaries, found fertile ground among the Cherokees. They were willing to accept the white man's religion if accompanied by the white man's education.

The most imposing building at New Echota is the Court House, which, like the print shop, is a 1961 reconstruction. Unlike the print shop, the Court House is a tall, narrow building fairly bristling with dignity. The two story structure was used for Legislative council meetings, Supreme Court proceedings, and often by Rev. Worchester as a mission school.

The Cherokees were very progressive in their governmental institutions. As early as 1808 they revised and wrote down their tribal laws with the advice and assistance of Rev. Gideon Blackburn. Between 1817 and 1827, they reorganized their government to include an elective bicameral legislature consisting of a National Committee and a National Council.

The Cherokee nation consisted of eight judicial districts, and in 1822 it authorized a National Superior Court—later to be called the Supreme Court. The nation's greatest achievement was the National Constitution adopted in 1827.

New Echota was the high water mark of the Eastern Cherokees. Besides the existing buildings, there were other structures. There were stores, taverns, shops and residences, but they are gone now—like the Cherokees.

No one really knows where the first Cherokees came from, or even the origin of their name. They were residing in what was to become western North and South Carolina, eastern Tennessee, and northern Alabama and Georgia when DeSoto came through about 1540.

They were still there more than 100 years later when the first Englishmen, representing the Virginia Colony, contacted them in 1673. They were from all accounts a fierce, pugnacious people whose principal pleasure was war.

During the next 150 years, the Cherokees were to have plenty of war. In the course of many alliances, they fought with white men against other red men, with other red men against white men, and with white men against other white men. They fought with and against French, Spanish, English, and eventually American settlers. With every engagement they seemed to lose land.

With all these alliances and through intermarriage with the ubiquitous Scots traders, the Cherokees developed enough sophistication to see they were losing not on the battlefield, but at the treaty table. This realization sent the Cherokee leaders seeking the skills of politics and diplomacy.

Their desire for education replaced their enthusiasm for the warpath. As a result, between 1817 and 1827—just ten years—the Cherokees advanced themselves culturally from aboriginal savages to a remarkable frontier society.

They had a complete governmental system with a written constitution, a written language, and a national newspaper. They had rich men and poor, educated and ignorant. They had farmers and merchants, ministers and thieves. In short, they were a nation; and New Echota was their capital.

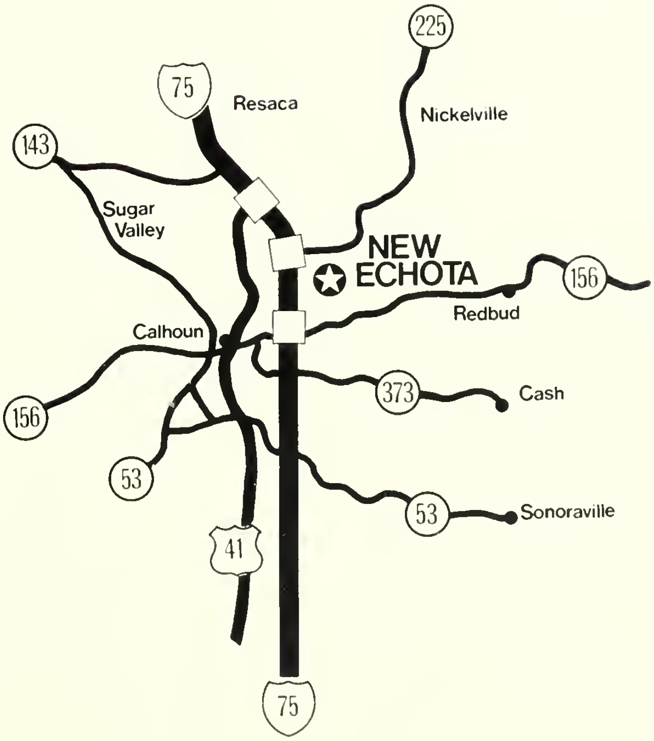
They also had other things: rich lands, gold, and imminent political power. This was intolerable to their white neighbors.

In 1802, a compact had been made between the United States Government and the State of Georgia agreeing to the eventual removal of all Indians from the state; in return, Georgia gave up claims to land in the west. In the 1820s, Georgia demanded that the contract be honored.

For several years there was much oratory, editorializing, and political maneuvering. The Cherokee government, led by dedicated Principal Chief John Ross, fought well, and at times brilliantly, but to no avail. In 1838, due mainly to the efforts of President Andrew Jackson, the last Cherokees were "emigrated" from Georgia to the western territories.

Today New Echota is a quiet and somewhat grim place, much like the men who built it. It has an odd coldness about it that can be felt even in the summer months. It's not a very impressive historical site, for not much is left of what once was a national capital.

Perhaps that is why it is important—no one lives there anymore.



A Clearly Present Danger

by Aaron Pass and Ron Odom

For a good many years there has been a growing realization that all wildlife species are not created equal. Some species have flourished, others have remained stable but vigorous, still others have not done so well. In this last category there are those that are and always have been rare, those that have declined either slowly or dramatically, and those that actually have disappeared.

The decline or total loss of a wildlife species is not a pleasant thing to contemplate. and, as a result, there has been much fuss and furor over "endangered species." This has become a tremendously emotional issue and a good amount of misunderstanding has resulted.

Many people seem to believe that virtually all wildlife is on the verge of extinction, while others feel that the problem is limited to a few well-publicized "basket-cases." As usual, the truth lies somewhere between. A great deal of scientific investigation and legislative action has gone into identifying and assisting our endangered wildlife.

The first effort aimed specifically at helping these troubled wildlife species, and which added a new term to our jargon, was the Endangered Species Preservation Act of 1966. This federal legislation was followed by similar acts in 1969 and 1973. These acts, administered by the U. S. Fish and Wildlife Service, were enacted by Congress to help check the decline of many animal species (wild plants were included in 1973).

Based on years of scientific investigation, a list of endangered species was compiled. The list documented 109 rare or endangered species (or sub-species), the degree of threat, and the probable reason for their condition. In this listing, the term "endangered species" was defined as ". . . in imminent danger of extinction." Another category, "Threatened," included "those . . . likely to become endangered in the foreseeable future over all or a significant portion of their ranges."

The 1969 and 1973 Endangered Species Acts superceded the original and broadened the effort. The 1969 Act included foreign wildlife and otherwise expanded the 1966 Act. Conservation programs, including the preservation of ecosystems on which endangered and threatened wildlife depends were included in 1973. This 1973 bill also requires the states to devise long range management plans for endangered species.

Of particular interest to the states was a provision in the 1973 Act to provide federal assistance (funding) to state-developed endangered species programs. Another clause provided that any *resident* species designated endangered or threatened would be regulated by the federal government if the state where it is located fails to adopt a cooperative agreement meeting federal standards.

In Georgia, 1973 saw the passage of two highly significant pieces of state legislation: the state Endangered Wildlife Act and the Wildflower Preservation Act. These acts, to be administered by the Department of Natural Resources, require state action toward both these wildlife resources.

The state Endangered Wildlife Act requires the Department to inventory all species of animal life determined to be rare, unusual, or in danger of extinction. From this inventory, a list of species in need of protection and rules to accomplish that protection are to be compiled.

The Wildflower Act is more specific. In addition to requiring the designation of protected species by the Department, certain acts such as digging and selling these plants without a license are forbidden. This jurisdiction is limited to state lands.

Shortly after the enactment of these two laws an endangered species committee was formed to organize a May, 1974, workshop at Fernbank Science Center, which gathered experts from throughout the state to help formulate the initial list. The basic document for this meeting was formulated by the DNR Natural Areas unit.

Eastern Brown Pelican

Photos by Aoron Poss

Other experts from all over the country carrying on pertinent research also were contacted. Finally, a preliminary Endangered and Threatened Species list was prepared.

This tentative list includes those species identified by the federal Threatened Species list of 1973, and others considered to be in a questionable status. The list is a bit more comprehensive than the federal list and uses several additional categories to classify the status of the species.

"Endangered" and "threatened" species were defined as in federal law but another class of protected species was included. *"Rare or unusual"* species are those which exist in small populations in the state, either in a restricted geographical region or thinly dispersed over a larger area. For example, the common raven and the red squirrel are northern species which are found only in the north Georgia mountains. Though not presently endangered or threatened, the limited numbers of these species puts them at risk.

"Status undetermined" species are those suspected of being in one of the protected categories but not so classified due to insufficient data. The glossy ibis and the hoary bat are examples of this status. *"Recently extirpated"* species are those which have disappeared from Georgia in historical times (since 1600), but still exist elsewhere. *"Recently extinct"* species means just that.

The decision to list any species as rare and endangered will be made on the basis of several factors contributing to its decline:

(a) the present or threatened destruction, modification, or curtailment of its habitat;
(b) over utilization for commercial, sporting, scientific, or educational purposes;
(c) disease or predation;
(d) inadequacy of existing regulation;
(e) other natural or man-made factors affecting its continued existence.

The Game and Fish Division currently is in the process of annotating the preliminary state list of endangered and threatened birds and mammals. Additional information to supplement the list is being gathered regarding distinguishing characteristics, distribution, densi-

American Alligator

Osprey

ties, population trends, limiting factors, and key habitat areas.

A rough draft of this status report is being prepared and will be distributed to wildlife experts throughout the state for final comments and criticisms. After this final review the report will be revised, published, and made available to the public. From the final status report future needs of the program should be easily identified.

The Game and Fish Division currently is formulating long-range plans for those species of fauna listed as endangered by the federal government, so Georgia can qualify for funding under the Endangered Species Act of 1973.

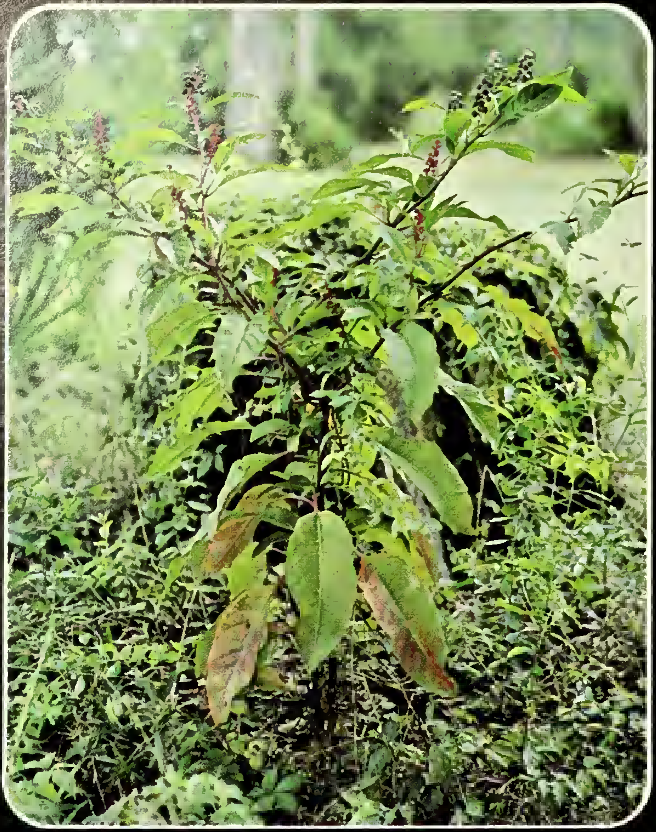
The future of Georgia's endangered species program will depend entirely on the availability of funding. Assuming adequate funding, future program plans call for:

—Continue updating the list
—Initiate research, surveys and management
—Evaluate key habitat areas
—Acquire key habitats
—Evaluate and classify species listed as "status undetermined" on the state list.

Of course the most important facet of the endangered species program is long range management to aid the recovery of individual species. Using the information gained through the identification and investigation process, it may be possible to develop specific plans to help each species.

Developing an endangered species program is not as simple or straightforward as it might appear. Natural systems are incredibly complex and man is only beginning to understand that complexity. Numbers alone do not tell the whole story. Some species may be few in number because they have always been so and are thus in a "normal" status. Another species may be currently numerous but endangered by threatened ecological relationships or dependencies.

Many times the basic reasons a species becomes endangered are obvious: small, geographically limited populations; loss of a unique habitat factor; or some human intrusion with a marked adverse impact on the species. Other times, the problems may be much more subtle and even camouflaged by the complexity of the species' ecology. In either case, efforts to assist the species must be based on a complete understanding of the problems. That understanding will take years to develop, but the effort at least has begun.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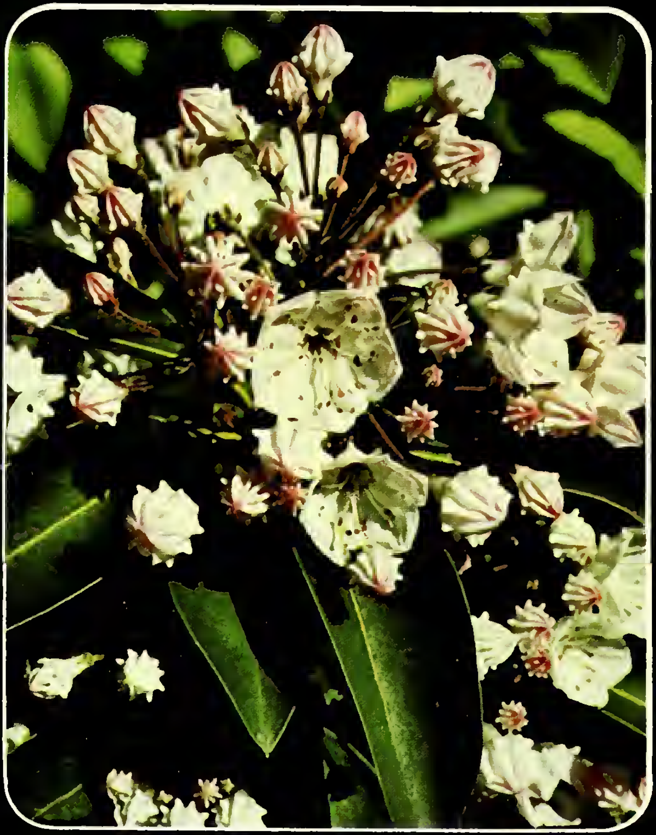
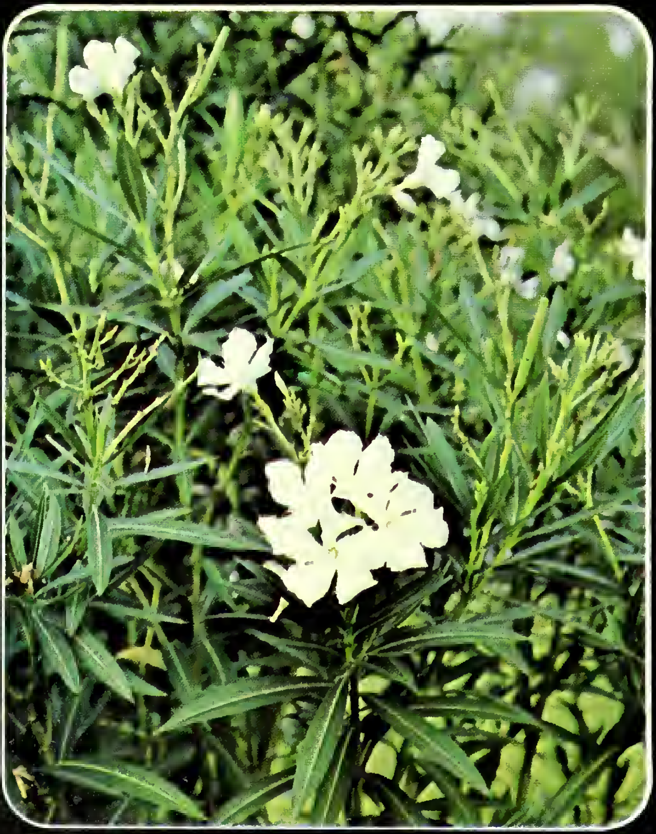
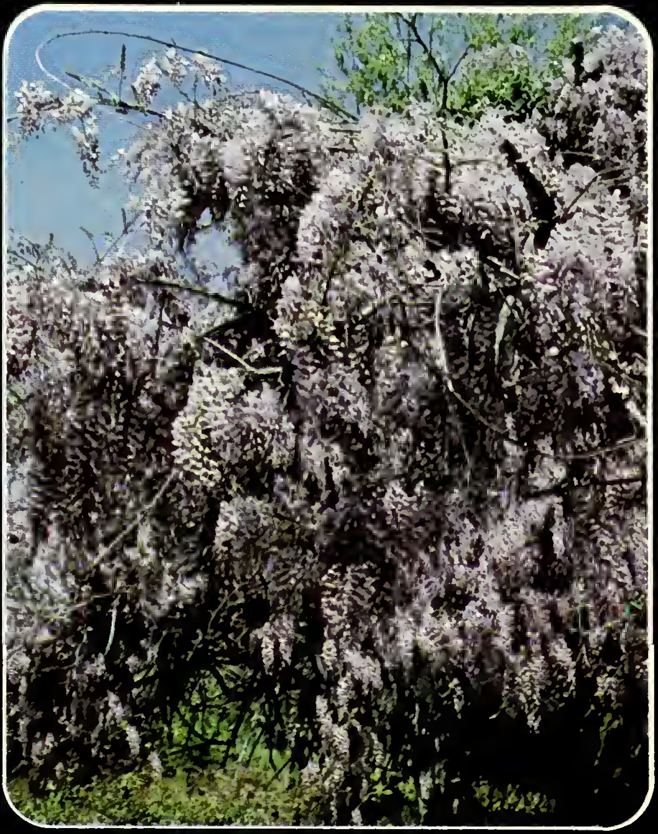

Laurel


Oleander


Wisteria

What Danger Lurks?

by Gibson Johnston, Jr.

Would you allow rattlesnakes to nest in your yard to control the mice? How about a black widow spider in the bookcase to eat the flies that might get in? Stupid questions, aren't they? But folks cultivate plants—to control moles in the garden, or for their sweet smell, or for their beauty—that are more dangerous than snakes or spiders. Not just dangerous . . . Deadly!

As an example, probably the most poisonous substance known to man comes from the castor (or mole) bean, which often is planted around the garden because it is said to prevent moles.

With the current emphasis on "natural" things —natural foods, natural looks, natural insect control, and even natural shampoo and toothpaste—there has been a rise in accidental poisonings by plants. More people are adversely affected by plants than by disease (and, to be technical, most disease is caused by "plants": bacteria and fungi). Remember that pollen allergy last spring, or the hay fever? Or the rash from that summer encounter with poison ivy? These ailments strike most of us, and little can be done about them except treat the symptoms.

Now think about those potted plants around your place, and the shrubbery in the yard, and those pesky weeds in the lawn and flower beds, and even the flowers themselves. What do you really know about them? They add pleasure to our lives, but are they really safe to have around? Many common Georgia plants have their less pleasing aspects: Dutch iris and narcissus, oleander, rhododendron and laurel, English ivy, mistletoe, and chinaberry all have poisonous properties. And the same stems and leaves that produce our famous Georgia peaches produce enough cyanide to kill, as do the stems and leaves of plums and cherries. Green parts of the potato plant are poisonous, even though the potato itself is quite edible.

But so what? Who eats flowers or leaves and stems? They probably taste horrible . . .

What about the child who decides that the pretty flowers or seeds look good enough to eat? Or the adult who unconsciously gnaws a leaf or twig as he goes about his chores? Yes, it happens. Often. And about 15,000 times a year in the United States someone ends up suffering for his carelessness with relatively common plants.

This certainly is no condemnation of plants, for life without them would be bleak indeed. And knowledge of what is harmful and what is not can make all plants enjoyable, no matter how potentially dangerous they might be.

Common sense will prevent most trouble:

First, know your plants. Should poisoning occur it is vitally important that the attending physician know the exact source to begin proper treatment.

Second, before indulging in wild and "natural" foods, be certain the plants are what you think they are. A small error with mushrooms, for example, can become the largest error you'll ever make.

Third, know the Poison Control Center telephone number: (404) 659-1212. This center can supply information on any type of poisoning. This could save a life.

Potentially Dangerous Plants

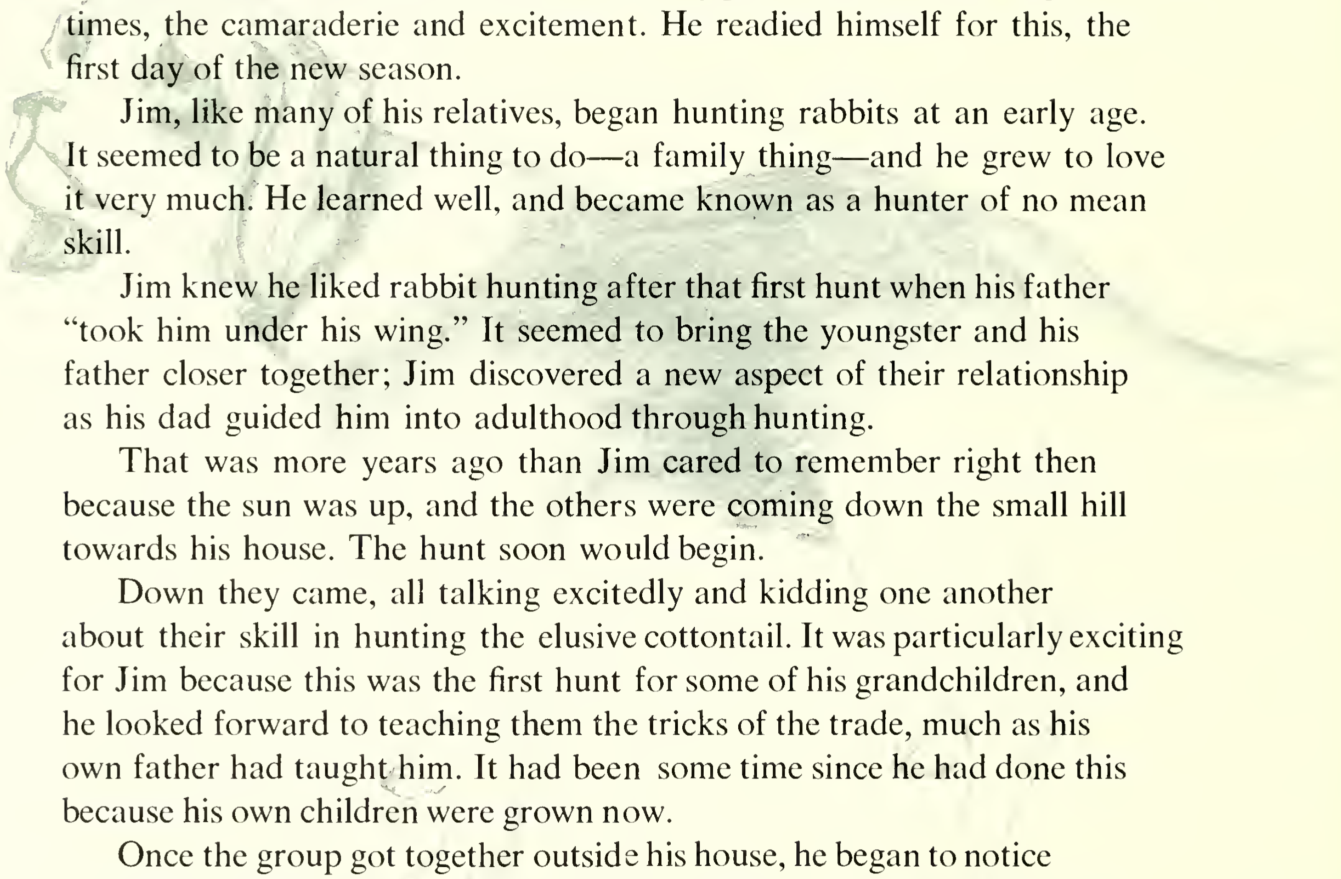
These are some of the most common poisonous plants found in Georgia. This list does not contain all the plants that are harmful, only some of the more familiar ones.

PLANT	***TOXIC PORTION***	***SYMPTOMS***
Pokeweed	Young shoots and branches, roots, berries	Severe gastrointestinal irritation, respiratory depressant, death.
	Eaten by some as greens; must be cooked in two waters to remove poisonous properties.	
Mayapple	Apple, foliage, roots	Contains at least 16 active toxic principles, primarily in the roots. Children often eat the apple with no ill effects, but several apples may cause diarrhea.
Water hemlock	All parts	Fatal. Violent and painful convulsions. A number of people have died from hemlock.
Nightshade	All parts, especially the unripe berry	Fatal. Intense digestive disturbances and nervous symptoms.
Poison hemlock	All parts	Fatal. Resembles a large wild carrot. Used in ancient Greece to kill condemned prisoners.
Jimson weed (thorn apple)	All parts	Abnormal thirst, distorted sight, delirium, incoherence and coma. Common cause of poisoning. Has proved fatal.
Poison ivy, poison oak, poison sumac	All parts, smoke from burning	Severe dermatitis.
Hyacinth, tulip, narcissus, daffodil	Bulbs	Nausea, vomiting, diarrhea. May be fatal.
Oleander	Leaves, branches	Extremely poisonous. Affects the heart, produces severe digestive upset and has caused death.
Dieffenbachia (dumb cane) **elephant ear**	All parts	Intense burning and irritation of the mouth and tongue. Death can occur if base of the tongue swells enough to block the air passage of the throat.
Castor bean	Seeds	Fatal. One or two seeds are near the lethal dose for adults.
Mistletoe	Berries	Can be fatal.

PLANT	**TOXIC PORTION**	**SYMPTOMS**
Monkshood	Fleshy roots	Digestive upset and nervous excitement.
Star-of-Bethlehem	Bulbs	Vomiting and nervous excitement.
Iris	Underground stems	Severe, but not usually serious, digestive upset.
Foxglove	Leaves	One of the sources of the drug digitalis, used to stimulate the heart. In large amounts, the active principles cause dangerously irregular heartbeat and pulse, usually digestive upset and mental confusion. May be fatal.
Rhubarb	Leaf blade	Fatal. Large amounts of raw or cooked leaves can cause convulsions, coma, followed rapidly by death.
Wild and cultivated cherries, peach, plum	Twigs, foliage	Fatal. Contains a compound that releases cyanide when eaten. Gasping, excitement, and prostration are common symptoms that often appear within minutes.
Oaks	Foliage, acorns	Affects kidneys gradually. Symptoms appear only after several days or weeks. Takes a large amount for poisoning. Children should not be allowed to chew on acorns.
Elderberry	Shoots, leaves, bark	Children have been poisoned by using pieces of the pithy stems for blowguns. Nausea and digestive upset.
Black locust	Bark, sprouts, foliage	Children have suffered nausea, weakness and depression after chewing the bark and seeds.
Chinaberry	Ripe berries	Respiratory depression, death.
Tung tree	Nuts and leaves	Gastroenteritis.
English ivy	All parts	Dermatitis.
Wisteria	Seeds, pods	Mild to severe digestive upset. Many children are poisoned by this plant.
Laurels, rhododendron, azaleas	All parts	Fatal. Produces nausea and vomiting, depression, difficult breathing, prostration and coma.
Jasmine	Berries	Fatal. Digestive disturbance and nervous symptoms.
Yew	Berries, foliage	Fatal. Foliage more toxic than berries. Death is usually sudden without warning symptoms.

Old Jim

by Jim Ryan



Old Jim awakened to a clear, crisp November day. He arose and looked outside and found the sun dancing its rays off the ground's new frost, the first of the season. A slight restlessness and anticipation began stirring through the pines. He remembered the many past seasons and their good times, the camaraderie and excitement. He readied himself for this, the first day of the new season.

Jim, like many of his relatives, began hunting rabbits at an early age. It seemed to be a natural thing to do—a family thing—and he grew to love it very much. He learned well, and became known as a hunter of no mean skill.

Jim knew he liked rabbit hunting after that first hunt when his father "took him under his wing." It seemed to bring the youngster and his father closer together; Jim discovered a new aspect of their relationship as his dad guided him into adulthood through hunting.

That was more years ago than Jim cared to remember right then because the sun was up, and the others were coming down the small hill towards his house. The hunt soon would begin.

Down they came, all talking excitedly and kidding one another about their skill in hunting the elusive cottontail. It was particularly exciting for Jim because this was the first hunt for some of his grandchildren, and he looked forward to teaching them the tricks of the trade, much as his own father had taught him. It had been some time since he had done this because his own children were grown now.

Once the group got together outside his house, he began to notice something different from other opening days. He was being excluded from the group, conversationally, and, finally, physically. The others were leaving without him, and he was left standing outside his house. He was too old to hunt rabbits anymore, and it hurt him deeply.

Old Jim died later that season, and was buried near the thickets where he so loved to hunt with his friends. He was "one of a kind", and probably will never be equaled in the sport of rabbit hunting. Old Jim was my beagle.

HYPOTHERMIA

by Margaret Tucker

"He died of exposure." We've all seen that phrase in a newspaper story about a lost hiker or hunter. But how do you die of "exposure"? What really happens? Most people can be found before they starve or die of thirst. Do they freeze to death? Not literally. Lots of people die of "exposure" when temperatures are far above freezing: heat loss is the killer.

Hypothermia is the word for it. "Hypo"—below normal, "thermia"—temperature. When the body's core temperature drops from 98.6° F to about 96°, the victim begins to shiver and loses his ability to perform complicated tasks.

If it drops to about 91°, he stumbles, slurs his speech, and can't think well. At about 86°, he gets irrational; at 81°, he goes into a stupor. A little colder and he becomes unconscious. If his body temperature drops below 78° F, the victim will be in a helpless slide toward death. The period from onset of symptoms to death need take only a few hours if heat loss is rapid and nothing is done to warm the victim.

Heat is lost many ways: by conduction or draining away through evaporation from

Hypothermia Chart

This chart indicates the length of time a victim can survive total immersion in water of various temperatures. Although the danger to winter hunters and fishermen is clear, summer anglers should be aware that north Georgia streams can remain dangerously cold through most of the summer.

Water Temp. (°F)	Exhaustion or Unconsciousness	Expected Time of Survival
32.5	Under 15 Min.	Under 15-45 Min.
32.5-40.0	15-30 Min.	30-90 Min.
40-50	30-60 Min.	1-3 Hr.
50-60	1-2 Hr.	1-6 Hr.
60-70	2-7 Hr.	2-40 Hr.
70-80	3-12 Hr.	3-Indef.
Over 80	Indef.	Indef.

This canoeist is well prepared for an icy dunk. Note his rubber wetsuit under the lifejacket, two good precautions for late fall and early spring paddling.

Photo by Margaret Tucker

the skin, even in cold weather, and through normal breathing; through radiation out into the air from body surfaces; through convection—when in still air, the body is surrounded by a little "blanket" of its own warmed air, but when this layer moves, heat is lost.

The wind blowing around a trout fisherman and the cold water he's standing in carry away heat rapidly. If the fisherman falls and wets his clothes he'll lose heat even faster. When he's wet and in the wind, he might as well be wrapped in ice.

How do you keep your body warm with all this heat loss going on? Well, the body has several automatic reactions to cold:

1) It can constrict the capillaries in the skin and cut down blood flow to keep the vital inner organs and brain warm. The temperature of your skin actually can drop 30 or 40 degrees to save heat.

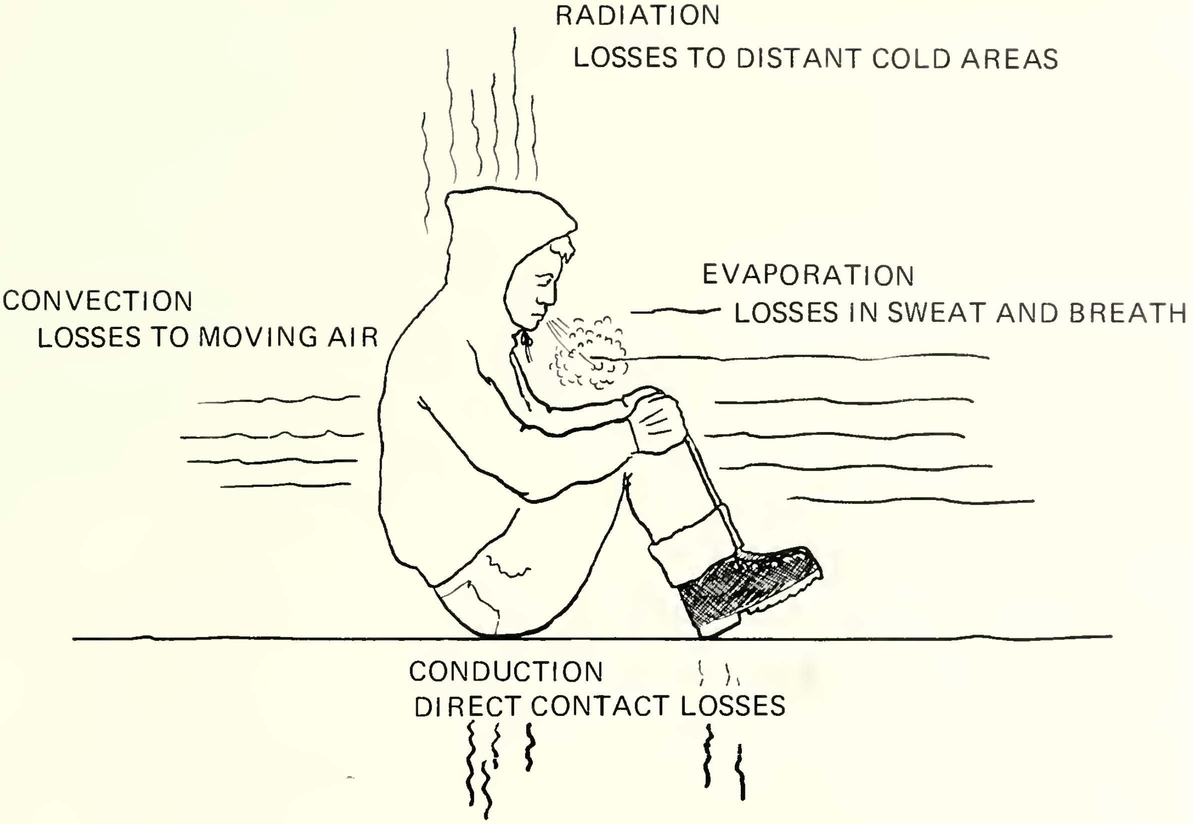
2) If heat loss continues, the body automatically starts shivering, and the muscles contract to produce heat. This is exactly what you do consciously when you jog in place to keep warm, but shivering can be uncontrollable. Of course, this muscle activity in severe shivering can tire you out as quickly as fast walking.

3) The food you eat is burned both for heat and for muscle energy. If you're cold, your metabolic rate (the rate at which your body burns food) gets higher. If there's no food in your stomach and you have none with you, you won't be able to keep up the

Wind chill index

To find out how cold it really is, check the temperature; then move down that column until you reach the wind speed: on a 20° F day, a 15 m.p.h. wind drops the effective temperature to −6° F!

Actual Air Temp. (°F)	40	30	20	10	0	−10	−20	−30
Wind speed (MPH)								
10	30	16	2	−9	−22	−31	−45	−58
15	25	11	−6	−18	−33	−45	−60	−70
20	20	3	−9	−24	−40	−52	−68	−81
25	15	0	−15	−29	−45	−58	−75	−89
30	10	−2	−18	−33	−49	−63	−78	−94
35	10	−4	−20	−35	−52	−67	−83	−98
40	10	−4	−22	−36	−54	−69	−87	−101



high metabolism and shivering very long without becoming exhausted. Unless you can stop losing heat by covering up and getting out of the wind and cold, you'll soon be in trouble.

The problem is that you may not know how close you are to trouble. Many people think that because the temperature's only in the 40s or 50s and not freezing, the cold won't do anything but make them uncomfortable. They're wrong—dead wrong sometimes.

Rainy or overcast days can be just as dangerous as blizzards if you're not prepared, and hypothermia is a danger in spring because a sunny morning can change to rain or cold with little warning.

Getting wet in winter or spring signals potential danger. Most wet clothing loses its insulating value. Only wool retains much body heat when it's wet. If the wind comes up, the wet person really is cold, because each mile per hour increase in wind velocity is roughly equivalent to a one degree drop in temperature.

Besides ignoring the weather, people ignore warning signs from their own bodies—fatigue, stumbling, slurred speech, blue skin. The strong outdoorsman often is a greater hypothermia risk than a weaker man or woman, because the "tough guy" may push himself to exhaustion. His reason may fail before his strength gives out, because hypothermia attacks the mind. When the body core gets cool, thinking is affected. Cold can sneak up on you like alcohol does.

Ever gone on when you were tired, cold—even shivering—just because you were determined to reach the mountain top? People do. They keep walking, refusing to put on their rain gear because it's too much trouble to open the pack, refusing to quit fishing before catching a limit.

The person outdoors alone who ignores his shivering limbs and stumbling feet may soon begin to wander in a daze, unable to save himself. People have died of hypothermia because they did apparently stupid things like leave a shelter or take an obviously wrong trail. Sometimes it's panic; but often they've succumbed to the mind-numbing effects of cold.

If you're in a party and someone begins to show the signs of hypothermia—stumbling, awkwardness, slurred speech, blue skin—you may have to take over and call the shots. He may not be able to, even if he thinks he's O.K.

Here's what you should do, assuming you're more than 30 minutes from a hospital.

1) Get him into shelter away from the wind and insulated from the cold ground.

2) Get the wet clothes off.

3) If the hypothermia is mild and he's still conscious and rational, get dry clothes on him and put him in a sleeping bag, prewarmed by someone else if possible. Build a fire. Give him warm liquids and food.

4) If the case is severe and he's unconscious or irrational, more drastic efforts will be necessary because his body has lost its ability to warm up. Leave him stripped, strip yourself and get into the bag with him. Or sandwich him between two people. Don't try to give him fluids until he's conscious. Rewarming can take hours, and the victim should be watched carefully for signs of relapse. Get him to a doctor as soon as you can, keeping him warm.

Tips on Preventing Hypothermia

It's a lot easier to prevent hypothermia than to reverse it when the process is underway. Be prepared. It's not weakness to pack an extra sweater, some emergency chocolate, a rain suit, waterproof matches, and a tarp.

What if you don't make it back to camp before dark? To ignore the worst possibilities and rely on luck and your ability to tough it out is as senseless as a football coach refusing to change from the offense to defense just because the other team got the ball. When you're outdoors, nature always has the ball. What's more, she makes the rules, and she's not above changing them as you go along, especially in March.

1. Keep your energy and heat production high by snacking. Take candy or trail food in your pocket. Don't skip any meals.
2. Regulate your body heat with several layers of clothing. They trap more air than a single thick layer, and you can take something off if you get hot.
3. Stay dry. Pack rain gear and put it on before you get wet. Be sure it's both water and windproof. Ponchos are nearly worthless in a wind. Don't get wet with sweat. If you're on water, take along extra dry clothes in a waterproof bag.
4. If your feet are cold, put on a hat. More than half your body's heat loss may be from your head and neck because lots of blood goes to the brain, and you can't cut down on the flow to conserve heat.
5. Be flexible in your plans. Stop early and pitch a comfortable camp if you're tired and cold. Later you may not be able to. Always take a cheap, light, "tube tent" or tarp in the early spring if you go far from shelter.
6. Use the right gear. Wool is warmer than cotton and is the only fabric that still insulates after it's wet. If you know you'll be wet during sailing, canoeing, or water skiing, invest in a wet suit. For camping on cold wet ground, an air mattress is poor insulation. Choose a closed-cell foam pad instead.
7. Carry waterproof matches and firestarting chemical in the winter and spring. Learn how to start a fire with damp wood.

Book Reviews

THE COMPLETE BOOK OF RIFLES AND SHOTGUNS
By Jack O'Connor, Outdoor Life/Harper & Row, 453 pp., $7.95(hardbound).
THE COMPLETE BOOK OF SHOOTING
By Jack O'Connor, Roy Dunlap, Alex Kerr, and Jeff Cooper, Outdoor Life/Harper & Row, 368 pp., $5.95 (hardbound).

Just what we've all been waiting for: two more books of the "all you ever wanted to know..." genre. At first glance one might think they were the same book with only the names changed to protect the innocent; but they actually are very different. Dealing with the same basic subject matter, they use entirely different approaches, and even O'Connor's style is altered considerably.

CBO Rifles and Shotguns by O'Connor is crisp, technical, and one of the classics in firearms literature. First published in 1961, it now is in its 16th printing and has been completely updated. The text and many of the photos are a stroll down memory lane for O'Connor fans who followed his guns department column in *Outdoor Life*. The book strongly leans to rifles in 347 of its 453 pages. It is an accurate, knowledgeable text.

CBO Shooting, by O'Connor, et al., is a bit more informal. It is less concerned with what guns are than with how to use them. O'Connor is more folksy here and often given to yarn spinning—but they are good yarns. Two of the other authors are little more than knowledgeable sidemen, who write straightforwardly and well about their specialties. Roy Dunlap deals with competitive rifle shooting and Alex Kerr explains trap and skeet.

Jeff Cooper on handguns is another story. A real challenge to master O'Connor, Cooper's writing is not so witty, but his knowledge certainly is as exhaustive. Cooper is another of those straightforward writers who knows what he is trying to say and says it.

On a point by point comparison *CBO Rifles and Shotguns* wins hands down. *Shooting* has not been as carefully revised and appears to be more of a bargain publication. *Shooting* does, however, include handguns, which may be a point in its favor.

Actually the books do not compete, although there is some duplication. Their main similarity is O'Connor's writing. He is unquestionably one of the most knowledgeable gun writers ever, and he makes even a ballistics table readable.

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